

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently amended) A semiconductor device comprising:

a plurality of transistors comprising different gate insulator film in their thickness value, said plurality of transistors having different thickness values of a gate electrode thereof in correspondence to the thickness values of the gate insulator film thereof,

wherein said plurality of transistors comprise lightly doped drain regions,

wherein said gate electrode includes an impurity to suppress depletion ~~which is implanted when forming said lightly doped drain regions~~, and

wherein said lightly doped drain regions have depths corresponding to said thickness values of said gate electrode and said gate insulator film.

Claim 2. (Previously presented) The semiconductor device according to claim 1, wherein said plurality of transistors comprise a plurality of MOSFETs formed on a substrate.

Claim 3. (Previously presented) The semiconductor according to claim 2,

wherein said plurality of MOSFETs includes a core-purpose MOSFET and an I/O-purpose MOSFET, and

wherein said core-purpose MOSFET has a smaller thickness of said gate insulator film than that of said I/O-purpose MOSFET and also has a smaller thickness of said gate electrode than that of said I/O-purpose MOSFET.

Claims 4-6. (Canceled).

Claim 7. (Previously presented) The semiconductor device according to claim 1, wherein said plurality of transistors comprise another lightly doped drain region.

Claim 8. (Previously presented) The semiconductor device according to claim 7, wherein said lightly doped drain region is deeper than said another lightly doped drain region.

Claims 9-10. (Canceled).

Claim 11. (Previously presented) The semiconductor device according to claim 2,
wherein said plurality of MOSFETs includes a core-purpose MOSFET and an I/O-
purpose MOSFET, and
wherein said core-purpose MOSFET has a smaller thickness of said gate insulator film
than that of said I/O-purpose MOSFET.

Claim 12. (Previously presented) The semiconductor device according to claim 2,
wherein said plurality of MOSFETs includes a core-purpose MOSFET and an I/O-
purpose MOSFET, and
wherein said core-purpose MOSFET has a smaller thickness of said gate electrode than
that of said I/O-purpose MOSFET.

Claim 13. (Previously presented) The semiconductor device according to claim 3, wherein said core-purpose MOSFET comprises an N - channel MOSFET for being driven on a supply voltage of about 1.0v.

Claim 14. (Previously presented) The semiconductor device according to claim 3, wherein said I/O-purpose MOSFET comprises an N - channel MOSFET for being driven on a supply voltage of about 3.3v.

Claim 15. (Previously presented) The semiconductor device according to claim 1, wherein one of said lightly doped drain regions comprises an I/O-purpose P-well with an N - type impurity at a predetermined density and a predetermined energy level, wherein said N - type impurity comprises phosphorous.

Claim 16. (Previously presented) The semiconductor device according to claim 15,
wherein said predetermined density is about $2 \times 10^{13}/\text{cm}^2$, and
wherein said predetermined energy level is about 30 keV.

Claim 17. (Previously presented) The semiconductor device according to claim 7, wherein one of said another lightly doped drain regions comprises a core-purpose P-well with an N - type impurity implanted at a predetermined density and a predetermined energy level, wherein said N - type impurity comprises arsenic.

Claim 18. (Previously presented) The semiconductor device according to claim 17,
wherein said predetermined density is about $5 \times 10^{14}/\text{cm}^2$, and
wherein said predetermined energy level is about 2.5 keV.

Claim 19. (Previously presented) The semiconductor device according to claim 1,
wherein said plurality of transistors comprise a plurality of sidewalls, said plurality of
sidewalls comprising a first sidewall and a second sidewall, and
wherein said first sidewall has a height greater than that of said second sidewall.

Claim 20. (Previously presented) The semiconductor device according to claim 1, wherein
one of said lightly doped drain regions comprises an N - type impurity implanted at a
predetermined density and a predetermined energy level, wherein said N - type impurity
comprises arsenic.

Claim 21. (Previously presented) The semiconductor device according to claim 20,
wherein said predetermined density is about $5 \times 10^{15}/\text{cm}^2$, and
wherein said predetermined energy level is about 30 keV.

Claim 22. (Previously presented) A semiconductor device comprising:

a plurality of transistors having different gate insulator film thickness values, said plurality of types of transistors having different thickness values of a gate electrode thereof in correspondence to the thickness values of the gate insulator film thereof,

wherein said plurality of transistors comprise a plurality of sidewalls, a first lightly doped drain region, and a second lightly doped drain region, where said first lightly doped drain region and said second lightly doped drain region are formed using said plurality of sidewalls and said gate electrode as a mask, and

wherein said first and second lightly doped drain regions have depths corresponding to said thickness values of said gate electrode and said gate insulator film.

Claim 23. (Previously presented) A semiconductor device comprising:

a plurality of transistors having different gate insulator film thickness values with a polysilicon film layer, said plurality of transistors having different thickness values of a gate electrode thereof in correspondence to the thickness values of the gate insulator film thereof,

wherein said thickness of said gate insulator film varies based on the amount of deposited gate electrode materials,

wherein said plurality of transistors comprise a plurality of sidewalls, and lightly doped drain regions formed using said plurality of sidewalls and said gate electrode as a mask, and

wherein said lightly doped drain regions have depths corresponding to said thickness values of said gate electrode and said gate insulator film.

Claim 24. (New) A semiconductor device comprising:

a plurality of transistors comprising different gate insulator films in their thickness value, said plurality of transistors having different thickness values of gate electrode in correspondence to the thickness values of the gate insulator film thereof,

wherein said plurality of transistors comprise a plurality of MOSFETs formed on a substrate,

wherein said plurality of MOSFETs comprise a core-purpose MOSFET and an I/O-purpose MOSFET, and

wherein said core-purpose MOSFET has a smaller thickness of the gate insulator film than that of said I/O-purpose MOSFET and has a smaller thickness of the gate electrode than that of said I/O-purpose MOSFET, and also has smaller depths of lightly doped drain regions of said core-purpose MOSFET than that of said I/O-purpose MOSFET.